

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-17 are currently pending, Claims 1, 5, 8, and 12 having been amended, and Claims 15-17 having been added for consideration. The changes and additions to the claims do not add new matter and are supported by the originally filed specification, for example, on page 18, lines 13-15; page 21, line 7 to page 23, line 13; Figures 2-3; and original Claim 1.

In the outstanding Office Action, Claims 1, 2, 6, 7, 8, 9, 13, and 14 were rejected under 35 U.S.C. § 102(b) as being anticipated by Momoh et al. (U.S. Patent No. 5,991,777, hereafter “Momoh”); Claims 3, 4, 10, and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Momoh in view of Johnson et al. (U.S. Pub. No. 2002/0166056, hereafter “Johnson”); and Claims 5 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Momoh in view of Liu et al. (U.S. Patent No. 5,680,482, hereafter “Liu”).

With respect to the rejection of Claim 1 under 35 U.S.C. § 102(b), Applicants respectfully submit that the present amendment to Claim 1 overcomes this ground of rejection. Amended Claim 1 recites, *inter alia*,

an application layer for converting a request from application software into a predetermined command and outputting the predetermined command, wherein the predetermined command is independent of a type of file system being used; and

a driver layer having a file system layer including a virtual file system and an audio-only file system, wherein the virtual file system receives the predetermined command from the application layer, determines a corresponding control command for the audio-only file system, and outputs the corresponding control command to the audio-only file system which outputs the received corresponding control command to a device driver in a device layer for said reproducing means to read the audio data from said audio-only disk-shaped recording medium, and to control the disk receiving means corresponding to said corresponding control command.

Applicants submit that Momoh fails to disclose or suggest at least these features of amended Claim 1.

Momoh, in Figure 2, shows a computing device which includes a processing unit 35, a magnetic hard disk drive 41, magnetic disk drives 42-43, an optical disk drive 44, and a removable optical disk drive 45 such as a CD-ROM. (See Momoh, col. 8, ll. 26-45). Momoh, in Figure 3, shows a client process 66 using an operating system 68 stored on the disk drive 41 to open and retrieve a file on a hardware device 82. (See Momoh, col. 9, ll. 41-44; col. 10, lines 26-45; Fig. 3). To open and retrieve a file on the hardware device, the client process 66 passes an I/O request to the file system driver 72 and device driver 74 via the I/O manager 86. (See Momoh, col. 9, ll. 41-44; col. 10, lines 26-45; Fig. 3).

The Office Action appears to interpret the client process 66 of Momoh as corresponding to the “application layer,” as recited in original Claim 1. (See Office Action, page 3, Citing, Fig. 3 and col. 10, lines 26-55 of Momoh). With regard to the feature “a file system layer including an audio-only file system for generating a control command to be outputted to a device driver in a device layer,” in original Claim 1, the Office Action appears to interpret the file system driver 72 of Momoh as corresponding to “a file system layer,” as recited in original Claim 1. (See Office Action, page 3, Citing, Fig. 3 and col. 10, lines 26-55 of Momoh). To access a file on the hardware device 82, the client process 66 of Momoh (as an application layer) sends an I/O request to the file system driver 72 (as a file system layer), the file system driver receives the I/O request, modifies the I/O request to merely change a file name to a particular location on a disk, and passes the modified I/O request onto the next driver. (See Momoh, column 10, lines 33-42). However, even if it is assumed that the client process 66 corresponds to an application layer and the file system driver 72 corresponds to a file system layer, the client process does not convert a request from application software into a predetermined command which is independent of a file system being used, and the file

system driver does not include an audio-only file system and a virtual file system which determines a separate and distinct control command corresponding to the audio-only file system based upon a predetermined command received from the client process.

Therefore, Momoh does not disclose or suggest “***an application layer for converting a request from application software into a predetermined command*** and outputting the predetermined command, ***wherein the predetermined command is independent of a type of file system being used***; and ***a driver layer having a file system layer including a virtual file system and an audio-only file system, wherein the virtual file system receives the predetermined command from the application layer, determines a corresponding control command for the audio-only file system, and outputs the corresponding control command to the audio-only file system*** which outputs the received corresponding control command to a device driver in a device layer for said reproducing means to read the audio data from said audio-only disk-shaped recording medium, and to control the disk receiving means corresponding to said corresponding control command,” as defined in amended Claim 1.

Accordingly, Applicants respectfully submit that amended Claim 1 (and all associated dependent claims) patentably distinguishes over Momoh.

Johnson and Liu have been considered but fail to remedy the deficiencies of Momoh with regard to amended Claim 1. Therefore, Applicants submit that amended Claim 1 (and all associated dependent claims) patentably distinguishes over Momoh, Johnson and Liu, either alone or in proper combination.

Amended independent Claim 8 recites features similar to those of amended Claim 1 discussed above. Thus, Applicants respectfully submit that amended Claim 8 (and all associated dependent claims) patentably distinguishes over Momoh, Johnson and Liu, either alone or in proper combination.

With respect to the rejection of original dependent Claims 5 and 12 under 35 U.S.C. §103(a), Applicants respectfully submit that the present amendments to Claims 5 and 12 overcome this ground of rejection. Amended Claim 5 recites, *inter alia*,

wherein said file system layer further includes a second file system different from the audio-only file system, the second file system corresponding to a disk-shaped recording medium on which computer data is recorded, the virtual file system being configured to determine a second corresponding control command for the second file system and output the second corresponding control command to the second file system, the second file system being configured to allow the disk-shaped recording medium on which computer data is recorded to be reproduced by said reproducing means when the disk-shaped recording medium on which computer data is recorded is received in the disk receiving means.

Applicants submit that Momoh in view of Liu fails to disclose or suggest these features of amended Claim 5.

As discussed above with regard to Claim 1, the Office Action had taken the position that the file system driver 72 of Momoh corresponds to the previously recited “file system layer including an audio-only file system.” However, Momoh does not describe that the file system driver 72 (as a file system layer) includes an audio-only file system in addition to a different second file system corresponding to a disk-shaped recording medium on which computer data is recorded. Additionally, as discussed above, Momoh does not describe “a virtual file system” as defined by amended independent Claim 1.

Accordingly, Applicants submit that Momoh fails to disclose or suggest “said file system layer further includes a second file system different from the audio-only file system, the second file system corresponding to a disk-shaped recording medium on which computer data is recorded, the virtual file system being configured to determine a second corresponding control command for the second file system and output the second corresponding control command to the second file system, the second file system being configured to allow the

disk-shaped recording medium on which computer data is recorded to be reproduced by said reproducing means when the disk-shaped recording medium on which computer data is recorded is received in the disk receiving means,” as defined by amended Claim 5.

Applicants note that the Office Action had relied on Liu to remedy the deficiencies of Momoh with regard to original Claim 5, which had recited “a file system layer further includes an ISO 9660 file system layer.” (See Office Action, at page 6-7, citing col. 9, ll. 2-5 of Liu).

Liu describes, in the cited portion, a CDFS in a filesystem layer which implements a protected mode ISO 9660-compliant CD-ROM file system. (See Liu, col. 9, ll. 1-5). However, Liu does not describe a filesystem layer including all of a virtual file system, an audio-only file system, and the ISO 9660-compliant CD-ROM file system (as a second file system), wherein the virtual file system determines a separate and distinct control command which corresponds to the ISO 9660-compliant CD-ROM file system based on a received predetermined control command.

In other words, neither Momoh or Liu describes a “virtual file system” as defined in Claim 1 which determines control commands for ***both an audio-only file system and a second file system*** (such as a CD-ROM file system, for example) based on received predetermined commands from an application layer which are independent of the type of file system being used.

Therefore, Applicants submit that the combination of Momoh and Liu clearly fails to disclose or suggest “wherein said file system layer further includes a second file system different from the audio-only file system, the second file system corresponding to a disk-shaped recording medium on which computer data is recorded, the virtual file system being configured to determine a second corresponding control command for the second file system and output the second corresponding control command to the second file system, the second

file system being configured to allow the disk-shaped recording medium on which computer data is recorded to be reproduced by said reproducing means when the disk-shaped recording medium on which computer data is recorded is received in the disk receiving means,” as defined by amended Claim 5.

Thus, Applicants respectfully submit that amended dependent Claim 5 patentably distinguishes over Momoh and Liu, either alone or in proper combination.

Amended dependent Claim 12 recites features similar to those of amended Claim 5 discussed above. Thus, Applicants respectfully submit that amended Claim 12 patentably distinguishes over Momoh and Liu, either alone or in proper combination.

With respect to new dependent Claim 16, Claim 16 recites *inter alia*,

the virtual file system including a register table
which stores a plurality of corresponding control
commands of a file system;

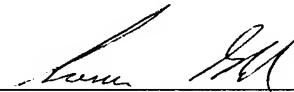
the virtual file system being configured to register
one of a plurality of corresponding control commands of
the audio-only file system in the register table, to retrieve
from the register table one of the plurality of corresponding
control commands based on the predetermined command
inputted from the application layer, and to send the
corresponding control command to the audio-only file
system.

Applicants respectfully submit that Momoh, Johnson and Liu, either alone or in proper combination do not disclose or suggest these features of new Claim 16 for at least the reasons described above with respect to independent Claim 1.

Consequently, in light of the above discussion and in view of the present amendments, the outstanding grounds for rejection are believed to have been overcome. The present application is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

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